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EVIDENCES OF FULL MATURITY AND EARLY DECLINE

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WE are blessed in America with a between season known as Indian Summer. As the days of autumn grow cooler to colder, somewhere toward the winter comes a genial glow in the air, a seductive restfulness, a luxurious period of weeks in which to bask gratefully in whatsoever surroundings one may be. This contentful interlude is said to be devised for the purpose of encouraging the primitive redman to do his undone chores, to catch up on his neglected provisioning against the pitiless winter. Just such a tranquil span may be reckoned upon when the sun turns and passes the meridian and looks into the face of man as he fronts the setting.

Not all the pageantry of early aging or over-maturity are inflictions to be endured. A peace oftentimes supervenes; a shedding of earlier anxieties; a settling down to an even progress. These are halcyon days in which the heretofore tempest-tossed one may look about, stretch his limbs and give interested attention to what goes on about him.

For most persons the hurly-burly is by then pretty well over; a position of advantage has been reached, the fires of life burn not so brightly, 'tis true, but more evenly. The machinery has become a little worn, weaker in spots, but all bearing surfaces have been abraded to meet each other in a smoother adjustment. There is less friction and far less racking.

When that blessed time has come, one's children are presumably able to look out for themselves; some have left the nest; at least anxieties on their account are subsiding or less urgent. Life's struggles are pretty well settled and progress is accruing.

The body cells are then less irritable; nerve centers are more stable; there is less tension in all voluntary muscles; a general evenness in action has set in. Whatever be our position in the procession of life we know pretty well we must now be content with it, accept such modifications and betterments as we are able to bring about by making the most of what we

have got, what we did with our foundations. Uncertainties are, or should be, nearing their end. From this time on our bodies as well as our careers can only be conserved; not radically changed for better or for worse.

Whatever destiny remains in our hands, to shape it is the part of wisdom to meet that destiny with a serene brow, with thankfulness for what we have enjoyed and are able to retain, to accept the position in life which we have won, to cross off our losses and forget them. It is a time to take account of stock and make up the report upon our trusteeship of that splendid heritage, our body and our mind. Satisfactions will be the greater if we have given reasonable care to the increments of our talents. Some part of a mature philosophy should then have been achieved, due to so much of mental serenity and discharge of duty as we have been able to command. Then we can pass on to other stages of our biologic evolution; of our journey to the grave.

To those who view their past as a mere category of mental achievements the account may not seem large. Compared with those who merely aimed to survive, to "get along," ours is certainly more varied, more vividly absorbing, more worthy of review or exhibition. We should never undervalue our body, however; it is of paramount subservience to or rather correlated with the mind.

Unless we have kept our material parts in good working order to enfold and maintain our soul or spirit, we have failed to "acquire merit" or to sustain the makings of a healthy self-esteem. Few indeed should fail here; no good reason exists for any one to so fail.

The phenomena of overful maturity and early aging deserve to be known, philosophically accepted and serenely assessed. From early maturity to late old age the characteristic retrograde changes are those of wearing out of structures. This wearing out takes place throughout the whole range of actively changing parts, in those which are constantly at work, and is especially seen in those which work incessantly to keep the body going. The constant wear and tear is shown most in the heart, the blood vessels, kidneys; and back of these come the great regulators of life, the ductless glands.

Back of these also lie those fairly stable structures the brain, and nerve cells. It is being demonstrated by the life insurance experts that breaking down (degenerative) diseases are markedly on the increase among all sorts and conditions of men, in all lands and under all circumstances civilized or savage.

One half the causes of premature death are shown to be capable of being prevented as are the infections which now happily are coming under better control. So you see in the final count behavior is paramount; blameworthiness is the reason for most decadence.

Hence it is of the utmost interest for each one of us to learn how we can become aware of the earliest origins, of backward stepping, the parting of the ways. Unfortunately, most phenomena of degenerative diseases are so insidious, give so little warning, that the only wise course is to expect their occurrence, to be vigilantly on our guard against them and live so sanely as to avoid the worst of them.

In order that any one shall protect himself he must learn his own peculiarities, his specific needs, and remodel his life when necessary in accord with the findings. Here instinct helps us much. We are fundamentally aware of what it is right to do and what is necessary to avoid doing. Experts tell us that whereas large gains are being made, notable victories gained, in combating tuberculosis, pneumonia, typhoid fever and other infections, there is a steady increase in the "degenerative diseases" and in the following order of frequency: liver and digestion, apoplexy and nervous diseases, heart, kidneys and urinary diseases. Cancer is not only gaining, but we do not yet clearly know in which directions to proceed to combat it successfully.

Some of the earlier senile phenomena are physical and others mental. Let me mention a few of each. Many can not always be distinguished from evidences of mere culpable neglect of normal precautions or due to laxities in attention.

It may occur that on physical exertion the heart beats noticeably, *i. e.*, one becomes aware of its throb and change in its rhythm or force. It may be over quick or "thumpy"; the breath becomes short for no reason or from slight cause. The digestion becomes more insistent to be indulged or pampered; appetite is more discriminating; taste (usually, not always) more exacting. Hence one's enjoyment of food is greater in one way for qualities and less for the satisfaction of healthy hunger. Appetite is often far too great for safety. Gross feeding occasionally tends to master judgment and must be wisely supervised. Cravings, fictitious longings, habit formed desires for non-essential or hurtful things, must be suppressed.

Since one's whole life tends to become more deliberate, the impulse to stool, to relieve the bowels is now better heeded, time is taken, opportunity welcomed and provided for.

The youthful energetic spring (vulgaliter "pep") no longer joyously activates the muscles. They may be very serviceable, but their energy is no longer exuberant. Weariness is readily recognized and more rests are, or should be, provided for. Fatigue states are not, or should not, be permitted to get too severe; self mastery must not be impaired by the strained attention of subconscious worries. One becomes by this time at least less of a fool in the matter of prodigalities of energizing; hence is ready to take precautions to avoid exhaustion.

Aches and "pains in the bones," really old age changes in the muscles, obtrude themselves. This means that the muscle cells are becoming less vigorous; are being replaced by fibrous tissue and the sensory nerve fibers are pinched by the stiffening structures. To be sure, gouty persons and those who have suffered minor infections in the joints do have some pains in them; they may become slightly swollen and tender on motion and later tender to touch, to pressure or to slight blows. Often finger joints are tender in the morning and this wears off later in the day. However, stiffness with over-sensitiveness to touch as well as motion is a natural evidence of old age changes.

At first these "reminders" are readily overcome by "warming up" at work, by moving freely the arms, fingers, by gentle exercises, walks or work. We may learn of these sensitive joints for the first time to our surprise by some extra pressure or a blow. Many latent tendernesses are due to a condition exceedingly common in middle age, of over-sensitiveness of the junctures of the muscle and fibrous attachments covering them which run into the tendon sheaths. These over-sensitive states are readily overcome as a rule by giving them something healthy to do. They affect the head, being the source of certain forms of headaches; the neck, shown on turning quickly or forcefully; also in the muscles of the eye when put upon a strain.

The urinary organs in older men are peculiarly liable to get out of order: rising at night to pass water is common and may be due to acid or irritating urine, irritable bladder (cystitis, etc.), to old urethral structures or to that scourge of old age, prostatism. This last is a loss of elasticity in the structures of the prostate gland, a mass of tissue surrounding the base of the urethra (outlet to the bladder). This demands prompt and radical attention; it can always be relieved and occasionally cured. If neglected it goes on to a hideous distress.

In women, especially in those who have had children and in whom the pressure of the pregnant uterus has overdistended the bladder, or in whom injuries to it have occurred in par-

turition, urination may be greatly disturbed and control lost. Leaking of urine, only too frequent, needs early and thorough-going attention. The act of urination is easier in later life in both males and females, which may also be a source of harm, causing the impulse to void to be disregarded. Urine accumulates, the bladder becomes distended, therefore dilated.

On the other hand, difficulties in voiding urine or the complete emptying of the bladder tends to apathy and neglect.

As the energies subside, unless there be some stimulus, some object or ambition to keep one interested in activities, the tendency is to omit care of the person, of suitable hygiene, and to fall into indolent habits; indeed, to become a nuisance to others. The one imperative need for the aging is action, wholesome doings, use of parts, changing of scene and circumstances. "Vanity is the mother of all the graces" and pride is a boon to old folks.

One notable alteration occurs in over maturity which, though merely esthetic, is significant. Emanations from the skin become offensive; fatty acids are formed producing different, repugnant or fetid odors. A dank mustiness replaces the normal pungency. To overcome this skin friction is more effective than mere bathing. Many devices are offered to neutralize these malodorous effluvia, but the best one is bodily hygiene and activities. The sweat often markedly increases or is suppressed; if insufficient the thyroid action is depressed. Reasonable activities are always needed to keep the skin action normal.

As old age advances so do heat making powers subside. Help is then needed to maintain combustion. The temperature sense becomes deranged. Chilliness is readily felt, artificial heat is craved; greater weight of clothing, warmer underwear is needed. Insensitiveness leads to evil effects of undue exposure, to chilblains, also to loss of local vitality, occasionally to gangrene. In others heat loss is impaired, the skin then acting badly, hence the surface is hot and dry, unrelieved by perspiration.

Changes in the ligaments and bones occur in the middle aged as well as during decline, inducing deformities in joints, particularly in the fingers and toes. Earlier defects become accentuated, such as bunions, fallen arches, flat feet, hammer toes. In old men there is usually a slouch, a drooping of the shoulders, a shrunken chest, bent knees. During maturity this disfiguring state too often is seen, mainly due to carelessness. In the old it then is also a weakening of the erector muscles of

the back. In women this is more rare, they being supported by vanity, a desire to maintain a good appearance.

Habit attitudes are often the chief factors in acquired deformities, notably desk workers, drivers and others who must sit for long periods on uncomfortable seats. All these deformities are mainly due to carelessness and can be prevented or limited by reasonable care; intelligent attention; a wish to keep a good form. This subject of posture is of real economic as well as of esthetic importance, as the tissues lose their pristine tone.

The disks of cartilage between the sections of the backbone in old people atrophy, but this comes late and need do no more than cause a shortening, not necessarily a bending. One of the most graphic and conspicuous features of aging, often seen in late maturity, is a slouching, slinking walk, uncertain feeble steps, a tottering-shuffling gait. This is directly due to loss of elasticity in the muscles (or rather aponeuroses and fibrous attachments) of the legs. Of course a relative degree of weakness contributes, but both can be alleviated; the one by passive stretching of the limbs, the other by attention to nutrition.

The teeth tend to fall out by reason of the shrinking of their sockets. Of course caries and pyorrhœa and other diseases contribute to dental losses. There are those who claim that tooth loss is a wise provision of nature to warn against the continuous use of meat and solid foods. Be this as it may, the best advice is to get rid of all suspicious teeth, especially any which have abscesses at their base and to "buy a store set"; chew your food thoroughly and add to your strength and length of days.

Nothing so marks the turning point of vigor, of efficiency, in short the advent of senility (abnormal old age), as loss in the organs of special sense. Time was when the lenses of the eye had begun to flatten and near vision was impaired, a man or woman was practically relegated to the scrap heap. Now we know that by the single device of wearing correcting glasses the years of usefulness, not to speak of progressive intelligence and happiness, become indefinitely prolonged.

One point should be emphasized here: A large proportion of degenerative conditions of the eye, disablements of diverse kinds and degrees, can readily be prevented by having the eyes examined early and in wearing correcting glasses and other devices to bring vision up to normal by mechanical and other adventitious aids. This is particularly significant in the case of cataract. Let brain workers, especially literary men, take notice.

Even to-day one meets dear simple old bodies who confidently repeat the errors of a half century ago (when the light of ophthalmology had scarcely dawned) that they personally *avoid* the wearing of glasses as long as possible, seeming to enjoy the condition of having performed a meritorious duty. Worse than this archaic folly is the arrogant conceit of those who refuse to have obvious and glaring defects in their own eyes corrected, or (most unforgivable) those of their children.

No one agency so fully compensates losses of capacity and capability due to aging as the use of properly fitting glasses to correct errors of refraction. Hearing is only second in importance in this connection to vision. Conservation of hearing is of paramount importance. Knowledge of the causes and cure of deafness has grown *pari-passu* with that of blindness.

Of the two sense organs, touch and smell, both of which become impaired as aging progresses, we need not dwell upon at this time. Taste, however, is of deep significance as years go by. It bears directly on the subject of nutrition, choice of foods and dietetic habits. A smaller amount of food is required after full maturity. The structures in middle age are all fully developed, or ought to be; hence structure building foods should be taken in smaller amounts. Taste for them naturally subsides, an instance of adaptation to changed conditions of structure and function. The hydrochloric acid and stomach juices are less, hence a craving for pungent highly stimulating substances like pepper and salt usually remains. Acids are craved, and fruit acids are of much value. Alkaline and insipid foods are disliked.

Decomposition in the intestines is increased though the products give less discomforts. The total amount of urea and uric acid eliminated is far less in old age; only about one half the CO_2 is exhaled as in early maturity. Fats are not needed, they are the chief fuel, hence the bile is diminished.

Disease processes and their effects peculiar to the descending epochs must be reckoned with in addition to the normal and usually recurring changes of late maturity and aging. In every one slight injuries have occurred in earlier years, some of which leave strains, scars, alterations in structures, which may give no evidence of their existence till weaknesses and deteriorations in structures set in, as senility approaches.

Some of these injuries (traumata) induce habits of wrong use or disuse which limit or vitiate normal action or function. Effects may be shown in peculiarities of motion, of speech (articulation), of attitude, of energy or of indolence.

Attitude errors, posture peculiarities or anomalies, commonly result from slight injuries. Also errors of gait, limps, of placing the feet arise, many of which can be corrected or eliminated. Acquired faults from ill fitting clothes, corsets, shoes, collars, belts, braces, occur in many persons unless vigilantly watchful.

Habits of using canes for support, even of crutches, may be the result of slight injuries, long recovered from. Fear, apprehension, cause these to remain, and the need for them is psychic and fictitious. There may be some local rigidity, some limitation of normal motion, quite curable. These conditions form a fertile psychopathic ground for quacks, charlatans.

Aching tiredness is common in those who remain much in wrong attitudes or in disease. The cure is simple and imperative, abundant varied, wholesome action. The older these errors are the more difficult to eradicate; the more difficult to reeducate to normal uses.